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WHAT IS CLAIMED IS:

1. An engine generator apparatus for rectifying and converting an alternating output of a generator, which has multi-phase windings and is driven by an engine, and converting the rectified output by an inverter into an alternating current at the frequency of a power system and the alternating current is interconnected with the source of said power system, comprising:

a means for starting the interconnection with the system source when a direct current voltage rectified rises up to first predetermined level after the start up of the engine and then increasing the output of the inverter;

a means for canceling the interconnection when the direct current voltage drops down to below second predetermined level, and for re-starting the interconnection with the system source when the direct current voltage returns back to the first predetermined level; and

a fault detecting means for judging that the power generator has a fault when the direct current voltage drops down to below the second predetermined level after the re-starting of the interconnection.

2. An engine generator apparatus according to claim

1, wherein the output of the inverter is gradually increased at the start of the interconnection of the apparatus with the power system.

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3. An engine generator apparatus according to claim 1, comprising a means where a generator fault signal is outputted, when the canceling and the re-starting of the interconnection with the power system is repeated.

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4. An engine generator apparatus according to claim 2, comprising a means where a generator fault signal is outputted, when the canceling and the re-starting of the interconnection with the power system is repeated.